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| U.S. Department of Commerce, Patent and Trademark Office |         |                                |                  |  | Docket No.   |          | Serial No.   |         |  |
|--|---------|--------------------------------|------------------|--|--------------|----------|--|---------|--|
| (PTO Form 1449 modified)                                 |         |                                |                  |  | WCVD/BG      |          | 09/678,266   |         |  |
| INFORMA  | TION D  | ISCLOSURE STA                  |                  | APPLICANTO 2001                              | Applicant    | -        | Confirmation   | on No.: |  |
|  |         |                                | CO               | DAY GY CENTER                                | Kôîi) et al. |          | 4642   |         |  |
| (Use sever   | al shee | ts if necessary)               |                  |  | Filing Date  |          | Group  |         |  |
|  |         | Examiner D. Za                 | ırneke           |  | October 3,   | 2000     | 2827   |         |  |
| U.S. Paten   | t Docu  | ments                          |                  |  |              |          |  |         |  |
| *Examiner<br>Initial                                     |         | Document<br>Number             | Issue<br>Date    | Applicant(s)<br>Name                         | Class        | Subclass | Filing Date<br>Appropriate                               |         |  |
| Bt   | A1      | 6,534,395                      | 03/18/03         | Werkhoven, et al.                            | 438          | 627      | 03/06/01   |         |  |
|  | A2      | 6,482,740                      | 11/19/02         | Soininen, et al.                             | 438          | 686      | 05/15/01   |         |  |
|  | A3      | 6,482,733                      | 11/19/02         | Raaijmakers, et al.                          | 438          | 633      | 04/26/01   |         |  |
|  | A4      | 6,482,262                      | 11/19/02         | Elers, et al.                                | 117          | 84       | 10/13/00   |         |  |
|  | A5      | 6,475,910                      | 11/05/02         | Sneh   | 438          | 685      | 09/22/00   |         |  |
|  | A6      | 6,475,276                      | 11/05/02         | Elers, et al.                                | 117          | 84       | 10/13/00<br>05/31/01<br>12/22/00<br>04/30/01<br>11/30/01 |         |  |
|  | A7      | 6,468,924                      | 10/22/02         | Lee, et al.                                  | 438          | 763      |  |         |  |
|  | A8      | 6,451,695                      | 09/17/02         | Sneh   | 438          | 685      |  |         |  |
|  | A9      | 6,447,933                      | 09/10/02         | Wang, et al.                                 | 428          | 635      |  |         |  |
|  | A10     | 6,423,619                      | 07/23/02         | Grant, et al.                                | 438          | 589      |  |         |  |
|  | A11     | 6,420,189                      | 07/16/02         | Lopatin                                      | 438          | 2        | 04/27/01   |         |  |
| 12   | A12     | 6,399,491                      | 06/04/02         | Jeon, et al.                                 | 438          | 680      | 04/06/01   |         |  |
| Me   | A13     | 6,391,785                      | 05/21/02         | Satta, et al.                                | 438          | 704      | 4 08/23/00   |         |  |
| Foreign Pa   | atent D | ocuments                       |                  |  |              |          |  |         |  |
| *Examiner  |         | Document                       | Date             | Country                                      | Class        | Subclass | Translation  |         |  |
| Initial  |         | Number                         |                  |  |              |          | YES  | NO      |  |
| (A)6   | B1      | 02/45167                       | 06/06/02         | wo   | H01L         | 27/00    |  |         |  |
| <b>D</b>   | B2      | 02/067319                      | 08/29/02         | wo   | H01L         | 21/768   |  |         |  |
| 1/4  | В3      | 01/66832                       | 09/13/01         | wo   | C30B         | 25/14    |  |         |  |
| OTHER AF   | ₹T      |                                |                  |  |              |          |  |         |  |
| *Examiner<br>Initial                                     | ·       | Including Author, T            | itle, Date, Pert | inent Pages, Etc.                            |              | _        |  |         |  |
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|  | C2      |                                |                  |  |              |          |  |         |  |
|  | ¢3 /    | $\mathcal{M}$                  |                  |  |              |          | 111  |         |  |
| Examiner   | 1/10    | Must La Date Considered 5/5/04 |                  |  |              |          |  |         |  |
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| U.S. Department of Commerce, Patent and Trademark Office |         |                         |                    | Docket No.           |                    | Serial No.        |  |     |
|--|---------|-------------------------|--------------------|----------------------|--------------------|-------------------|--|-----|
| (PTO Form 1449 modified)                                 |         |                         |                    |                      | AMAT/4714.P.T/TCG/ |                   | 09/678,266                                   |     |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT            |         |                         |                    | Applicant HUG 20     |                    | Confirmation No.: |  |     |
|  |         |                         | _00                | DV                   | Kori, et al.       | MOLOGY CE         | 4642900                                      |     |
| (Use several sheets if necessary)                        |         |                         |                    |                      | Filing Date        | )                 | Group  |     |
|  |         | Examiner D. Za          | rneke              |                      | October 3,         | 2000              | Examiner                                     |     |
| U.S. Pater   | t Docu  | ments                   |                    |                      |                    |                   |  |     |
| *Examiner<br>Initial                                     |         | Document<br>Number      | Issue<br>Date      | Applicant(s)<br>Name | Class              | Subclass          | Filing Date<br>Appropriate                   |     |
| (1)  | A1      | 6,372,598               | 04/16/02           | Kang, et al.         | 438                | 399               | 06/16/99                                     |     |
| ار ت   | A2      | 6,369,430               | 04/09/02           | Adetutu, et al.      | 257                | 382               | 04/02/01                                     |     |
|  | А3      | 6,368,954               | 04/09/02           | Lopatin, et al.      | 438                | 627               | 07/28/00                                     |     |
|  | A4      | 6,358,829               | 03/19/02           | Yoon, et al.         | 438                | 597               | 09/16/99                                     |     |
|  | A5      | 6,355,561               | 03/12/02           | Sandhu, et al.       | 438                | 676               | 11/21/00                                     |     |
|  | A6      | 6,342,277               | 01/29/02           | Sherman              | 427                | 562               | 04/14/99                                     |     |
|  | A7      | 6,333,260               | 12/25/01           | Kwon, et al.         | 438                | 643               | 06/24/99<br>08/19/98<br>10/12/99<br>09/07/99 |     |
|  | A8      | 6,284,646               | 09/04/01           | Leem                 | 438                | 629               |  |     |
|  | A9      | 6,207,487               | 03/27/01           | Kim, et al.          | 438                | 238               |  |     |
|  | A10     | 6,042,652               | 03/28/00           | Hyun, et al.         | 118                | 719               |  |     |
|  | A11     | 5,306,666               | 04/26/94           | Izumi                | 437                | 192               | 07/21/93                                     |     |
| $\mathcal{V}$  | A12     | 2003/0072975            | 04/17/03           | Shero, et al.        | 428                | 704               | 09/26/02                                     |     |
| m  | A13     | 2003/0049942            | 03/13/03           | Haukka, et al.       | 438                | 778               | 08/22/02                                     |     |
| Foreign Pa   | atent D | ocuments                | 6 1 mb 1 A -       |                      |                    |                   |  |     |
| *Examiner  |         | Document<br>Number      | Date               | Country              | Class              | Subclass          | Translation                                  |     |
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| (PH)   | B1      | 01/29893                | 04/26/01           | WO                   | H01L               | 21/768            |  |     |
| 7  | B2      | 01/29891                | 04/26/01           | wo                   | H01L               | 21/768            |  |     |
| M  | В3      | 2001-111000             | 04/20/01           | JP                   | H01L               | 27/105            |  |     |
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| *Examiner<br>Initial                                     |         | Including Author, T     | itle, Date, Pertin | ent Pages, Etc.      |                    |                   |  |     |
|  | C1      |                         |                    |                      | •                  |                   |  |     |
|  | C2      |                         | <u> </u>           |                      |                    |                   |  |     |
|  | 93      | 017                     |                    |                      |                    |                   | 1.1.1  |     |
| Examiner   | 1 1/1   | nell of                 | er                 |                      | Date Cons          | idered            | 15/04  |     |
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| U.S. Department of Commerce, Patent and Trademark Office  |                         |            |                        |                | Docket No.                     |                          | Serial No.       |                              |          |  |
|---|-------------------------|------------|------------------------|----------------|--------------------------------|--------------------------|------------------|------------------------------|----------|--|
| (PTO Form 1449 modified)  |                         |            |                        |                | AMAT/4714!P1/TCG/              |                          | 09/678,266       |                              |          |  |
| INFO  | RMAT                    | ION DI     | SCLOSURE STATE         | MENT BY        | APPLICANT                      | Applicant                |                  | Confirmatio                  | n No.:   |  |
| COPY  |                         |            |                        |                | YECHTULOGY CEN<br>Kori, et al. |                          | TER 2800<br>4642 |                              |          |  |
|   |                         |            |                        |                |                                | Filing Date              | Filing Date      |                              | Group    |  |
| Examiner D. Zarneke   |                         |            |                        |                |                                | October 3, 2000 Examiner |                  |                              |          |  |
| U.S. P  | atent                   | Docu       | ments                  |                |                                |                          |                  |                              |          |  |
| *Exami  | iner                    |            | Document<br>Number     | Issue<br>Date  | Applicant(s)<br>Name           | Class                    | Subclass         | Filing Date I<br>Appropriate | <b>f</b> |  |
|   | H                       | Ā1         | 2003/0032281           | 02/13/03       | Werkhoven, et al.              | 438                      | 640              | 09/23/02                     |          |  |
|   |                         | A2         | 2003/0031807           | 02/13/03       | Elers, et al.                  | 427                      | 569              | 09/17/02                     |          |  |
|   |                         | A3         | 2003/0013320           | 12/05/02       | Leskela, et al.                | 427                      | 250              | 03/15/02                     |          |  |
|   |                         | A4         | 2002/0187631           | 12/12/02       | Kim, et al.                    | 438                      | 637              | 12/05/01                     |          |  |
|   |                         | <b>A</b> 5 | 2002/0187256           | 12/12/02       | Elers, et al.                  | 427                      | 99               | 07/30/02                     |          |  |
|   |                         | A6         | 2002/0182320           | 01/16/03       | Kim, et al.                    | 438                      | 778              | 05/31/01                     |          |  |
|   |                         | A7         | 2002/0162506           | 11/07/02       | Sneh, et al.                   | 118                      | 715              | 06/28/02                     |          |  |
|   |                         | A8         | 2002/0155722           | 10/24/02       | 10/24/02 Satta, et al.         |                          | 704              | 04/15/02                     |          |  |
|   |                         | A9         | 2002/0121697           | 09/05/02 Marsh |                                | 257                      | 751              | 04/30/02                     |          |  |
|   |                         | A10        | 2002/0117399           | 08/29/02       | Chen, et al.                   | 205                      | 125              | 02/23/01                     |          |  |
|   |                         | A11        | 2002/0109168           | 08/15/02       | 08/15/02 Kim, et al.           |                          | 295              | 01/30/02                     |          |  |
|   |                         | A12        | 2002/0106846           | 08/08/02       | Seutter, et al.                | 438                      | 200              | 02/02/01                     |          |  |
|   | $\mathcal{H}$           | A13        | 2002/0105088           | 08/08/02       | Yang, et al.                   | 257                      | 774              | 10/31/01                     |          |  |
| Foreig  | n Pa                    | tent Do    | ocuments               |                |                                |                          |                  |                              |          |  |
| *Exami  | iner                    |            | Document               | Date Country   |                                | Class                    | Subclass         | Translation                  |          |  |
| Initial   |                         |            | Number                 |                |                                |                          |                  | YES                          | NO       |  |
| _(29  | <u>C</u>                | B1         | 1,167,569              | 01/02/02       | EP                             | C23C                     | 16/455           |                              |          |  |
|   |                         | B2         |                        |                |                                |                          |                  |                              |          |  |
|   |                         | B3         |                        |                |                                |                          |                  |                              |          |  |
| OTHE  | RAR                     | T          |                        |                |                                |                          |                  |                              |          |  |
| *Examir<br>Initial  | ner                     |            | Including Author, Titl | e, Date, Perti | inent Pages, Etc.              |                          |                  |                              |          |  |
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| *EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant. |                         |            |                        |                |                                |                          |                  |                              |          |  |

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| U.S. Department of Commerce, Patent and Trademark Office |              |   |                                  | Docket No.                                      |                                 | Serial No.   |                             |      |  |
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| (PTO Form 1449 modified)                                 |              |   |                                  |   | AMAT/471<br>WCVD/BG             | 4.Р1/ТССД-<br>///  |                             | ·    |  |
| INFORMA  | TION D       | ISCLOSURE STAT                                | Applicant AUG                    |   | Confirmation                    |  |                             |      |  |
|  |              |   |                                  | ADV   | Kori, et al.                    | TECHNOLS:  | Y CENTER 2<br>4642          | 2800 |  |
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|  |              | Examiner D. Za                                | rneke                            | * * *   | October 3,                      | 2000   | Examiner                    |      |  |
| U.S. Pater   | nt Docu      | ments   |                                  |   |                                 |  |                             | •    |  |
| *Examiner<br>Initial                                     |              | Document<br>Number                            | Issue<br>Date                    | Applicant(s)<br>Name                            | Class                           | Subclass   | Filing Date<br>Appropriate  |      |  |
| (AT  | A1           | 2002/0094689                                  | 07/18/02                         | Park  | 438                             | 694  | 03/07/02                    |      |  |
|  | A2           | 2002/0090829                                  | 07/11/02                         | Sandhu, et al.                                  | 438                             | 761  | 01/31/02                    |      |  |
|  | А3           | 2002/0076837                                  | 06/20/02                         | Hujanen, et al.                                 | 438                             | 3  | 11/28/01                    |      |  |
|  | A4           | 2002/0076507                                  | 06/20/02                         | Chiang, et al.                                  | 427                             | 569  | 10/24/01                    |      |  |
|  | A5           | 2002/0061612                                  | 05/23/02                         | Sandhu, et al.                                  | 438                             | 151  | 01/14/02                    |      |  |
|  | A6           | 2002/0055235                                  | 05/09/02                         | Agarwal, et al.                                 | 438                             | 430  | 10/29/01                    |      |  |
|  | A7           | 2002/0052097                                  | 05/02/02                         | Park  | 438                             | 507  | 05/03/01                    | •    |  |
|  | A8           | 2002/0048880                                  | 04/25/02                         | Lee   | 438                             | 253  | 08/08/01                    |      |  |
|  | A9           | 2002/0037630                                  | 03/28/02                         | Agarwal, et al.                                 | 438                             | 430  | 10/29/01                    |      |  |
|  | A10          | 2002/0031618                                  | 03/14/02                         | Sherman   | 427                             | 569  | 10/09/01                    |      |  |
| 1  | A11          | 2002/0019121                                  | 02/14/02                         | Pyo   | 438                             | 618  | 06/20/01                    |      |  |
| V  | A12          | 2002/0007790                                  | 01/24/02                         | Park  | 118                             | 715  | 05/03/01                    |      |  |
| mx   | A13          | 2002/0004293                                  | 01/10/02                         | Soininen, et al.                                | 438                             | 584  | 05/15/01                    |      |  |
| Foreign P  | atent D      | ocuments                                      |                                  | 0   |                                 |  |                             |      |  |
| *Examiner  |              | Document                                      | Date Countr                      | Country   | Class                           | Subclass   | Transla                     | tion |  |
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|  | C2           |   |                                  |   |                                 |  |                             |      |  |
|  | C3           | X - M   |                                  |   | - <del></del>                   | · · · · · · · · · · · · · · · · · · ·  | A. 1. 1                     |      |  |
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Sheet 5 of 5 sheet(s)

| U.S. Department of Commerce, Patent and Trademark Office  |              |                                      |                |                     | Docket No.                    |                 | Serial No.                   |          |  |  |
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| (PTO Form 1449 modified)  |              |                                      |                |                     | AMAT/4714.P1/TCG/*<br>WCVD/BG |                 | ,                            | 6        |  |  |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT   |              |                                      |                |                     | Applicant                     |                 | Confirmation No.:            |          |  |  |
| OODY  |              |                                      |                |                     | TECHNOLOGY<br>Kori, et al.    |                 | 4642                         |          |  |  |
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| Examiner D. Zarneke   |              |                                      |                |                     |                               | October 3, 2000 |                              | Examiner |  |  |
| U.S. Patent Documents   |              |                                      |                |                     |                               |                 |                              |          |  |  |
| *Examiner<br>Initial  |              | Document<br>Number                   | Issue<br>Date  | Applicant(s) Name   | Class                         | Subclass        | Filing Date I<br>Appropriate | f        |  |  |
| (0)   | A1           | 2002/0000598                         | 01/03/02       | Kang, et al.        | 257                           | 301             | 07/26/01                     |          |  |  |
| 1   | A2           | 2001/0054769                         | 12/27/01       | Raaijmakers, et al. | 257                           | 758             | 04/26/01                     |          |  |  |
|   | А3           | 2001/0054730                         | 12/27/01       | Kim, et al.         | 257                           | 301             | 05/23/01                     |          |  |  |
|   | A4           | 2001/0029094                         | 10/11/01       | Mee-Young, et al.   | 438                           | 597             | 09/16/99                     |          |  |  |
|   | A5           | 2001/0028924                         | 10/11/01       | Sherman             | 427                           | 255.28          | 05/24/01                     |          |  |  |
| 1   | A6           | 2001/0024387                         | 09/27/01       | Raaijmakers, et al. | 365                           | 200             | 02/22/01                     |          |  |  |
| X   | A7           | 2001/0009695                         | 07/26/01       | Saanila, et al.     | 427                           | 255.39          | 01/18/01                     | •        |  |  |
| M   | A8           | 2001/0002280                         | 05/31/01       | Sneh                | 427                           | 255.28          | 12/22/00                     |          |  |  |
|   | A9           |                                      |                |                     |                               |                 |                              |          |  |  |
|   | A10          |                                      |                |                     |                               |                 |                              |          |  |  |
|   | A11          |                                      |                |                     |                               |                 |                              |          |  |  |
|   | A12          |                                      |                |                     |                               |                 |                              |          |  |  |
|   | A13          |                                      |                |                     |                               |                 |                              |          |  |  |
| Foreign F   | atent D      | ocuments                             |                |                     |                               |                 |                              |          |  |  |
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|   | B1           |                                      |                |                     |                               | ·               |                              |          |  |  |
|   | B2           |                                      |                |                     |                               |                 |                              |          |  |  |
|   | В3           |                                      |                |                     |                               |                 |                              |          |  |  |
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|   | 1/ ]         |                                      | _//            |                     |                               |                 | 18/11                        | - 1      |  |  |
| Examiner  |              | Must severely Date Considered 5/5/04 |                |                     |                               |                 |                              |          |  |  |
| *EXAMINER Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through |              |                                      |                |                     |                               |                 |                              |          |  |  |